Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPHER J. KARGULA, MARK A. BOGUCKI, STEVEN T. SLUNICK, WILLIAM E. STEVENS, LAKSHMANA S. NARAHARISETTI and DENNIS G. KINDER

Appeal No. 2000-0655
Application No. 08/522,017

ON BRIEF

Before CALVERT, ABRAMS and BAHR, Administrative Patent Judges.

ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 11, 13-15, 17, 19, 20, 22 and 23. At that point, claim 16 had been indicated as containing allowable subject matter, and the other claims had been canceled. In the Answer, the examiner indicated that claims 17,19, 20, 22 and 23 are allowable. This leaves claims 11 and 13-15 before us on appeal.

We AFFIRM.

BACKGROUND

The appellants' invention relates to a quick connect fluid coupling. An understanding of the invention can be derived from a reading of exemplary claim 11, which appears in the appendix to the appellants' Brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Berry	5,383,688	Jan. 24, 1995
Bartholomew	5,413,387	May 9, 1995
Rea et al. (Rea)	5,542,717	Aug. 6, 1996 (filed Jun. 7, 1995)

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bartholomew in view of Berry.

Claims 11 and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rea in view of Berry.[1]

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 19) and the final rejection (Paper No. 12) for the examiner's complete reasoning in

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[1]On page 4 of the Answer, the examiner states that "claims 11, and 13-15 are rejected under 35 U.S.C. 103(a) . . . [as] set forth in . . . Paper No. 12." Since two rejections including claim 11 were recited in Paper No. 12, and both have been discussed in the Answer and in the appellants' Brief, we shall consider both as being before us on appeal.

support of the rejections, and to the Brief (Paper No. 18) and Reply Brief (Paper No. 20) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Both rejections are under 35 U.S.C. § 103. The question under Section 103 is not merely what the references expressly teach but what they would have suggested to one of ordinary skill in the art at the time the invention was made. See Merck & Co. v. Biotech Labs., Inc. 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). While there must be some suggestion or motivation for one of ordinary skill in the art to combine the teachings of references, it is not necessary that such be found within the four corners of the references themselves; a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference. See In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Insofar as the references themselves are concerned, we are bound to consider the disclosure of each for what it fairly teaches one

of ordinary skill in the art, including not only the specific teachings, but also the inferences which one of ordinary skill in the art would reasonably have been expected to draw therefrom. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966) and In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

The appellants' invention is directed to improvements in quick connect coupling devices. The claims on appeal recite a structure whose objective is to facilitate the correct alignment of a pilot member, in which a fluid handling member is received, with respect to the housing in which it is installed during the assembly process. The first rejection is that claim 11 is unpatentable over Bartholomew in view of Berry. It is the examiner's view that in Figure 36 Bartholomew discloses a housing (530, 548), a retainer (546), a fluid handling member (532), and a pilot member (bushing 550) for guiding the fluid handling member into the bore, all as required by the appellants' claim 11. The examiner concedes that the claimed circumferentially spaced axial ribs at the outer peripheral surface of the pilot member are not disclosed by Bartholomew, but points out that this feature is taught by Berry and concludes that it would have been obvious to one of ordinary skill in the art to provide such fins on the pilot member of Bartholomew in view of Berry's teaching that such would improve the device by locking the components together.

In the quick connector shown in Bartholomew's Figure 36, a fluid handling member 532 appears inherently to be centered as it is guided into place by the action of its tapered

nose portion 536 on an annular bushing 550, the latter thus performing the function of the appellants' pilot member 36. Bushing 550 and adjacent annular member 552 are installed in an enlarged portion of the housing, seated on a flange 554 on the end of the housing and the inner surface of the attached conduit 564. According to Bartholomew, "bushing 550 and the [adjacent] elastomeric sealing member 552 . . . form a fluid tight seal" between the inner wall of the fluid housing and the outer periphery of the fluid handling member which is being inserted (column 18, line 36 et seq.). Bartholomew does not explicitly teach that the bushing is guided or needs to be guided into place during its installation in the housing, or that it needs to be or is locked into place once installed.

Berry discloses a liner for the end of a conduit for electrical conductors which provides a smooth entry for the conductors. The liner comprises a cylindrical tube having a flange at one end which engages the end of the conduit. A plurality of flexible fins 20 are installed on the outside surface of the liner. The fins extend outwardly and are of such height as to engage the inner surface of the conduit when the liner is pressed into place. As described in the specification, the fins project

> a sufficient distance to provide a locking action when the liner is inserted into the conduit . . . [and are] sufficiently thin to collapse or bend to have one side substantially flush with the outer surface of the liner and the other side substantially in contact with the inner surface of the conduit to secure or lock the liner to the conduit. (column 2, lines 54-60; emphasis added).

From our perspective, Berry would have suggested to one of ordinary skill in the art that a first tubular element can be locked in place within a second tubular element upon insertion by the frictional interaction of projecting fins located on its outer surface and being of such height as to be collapsed when the element is pressed into its installed position.

Of course, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The explicit teaching provided by Berry is directed to the function of locking elements together. We fail to perceive any teaching, suggestion or incentive which would have led one of ordinary skill in the art to provide Bartholomew's bushing 550 or elastomeric sealing member 552 with fins on the outer surface, for there would appear to be no requirement or reason to lock them to housing 530. This being the case, we conclude that the combined teachings of Bartholomew and Berry fail to establish a prima facie case of obviousness with regard to the subject matter recited in claim 11, and we will not sustain this rejection.

Independent claim 11 also stands rejected as being unpatentable over Rea in view of Berry. Berry has been discussed above. With reference to Figure 3, Rea discloses a quick connect coupling comprising a tubular housing 16, a retainer 18, a fluid handling member 10 received within the retainer, and a seal retainer 22 (Figure 8) that is provided with "an angled annular pilot surface 22c" (column 4, line 39) which appears to interact with

the tapered end of fluid handling member 10 to guide the latter into the bore of the housing. Retainer 22 thus corresponds to the claimed "pilot member for guiding the fluid-handling member into the bore of said housing." Member 22 is locked into place in the housing by "an external annular snap rib or ring 22d on the exterior periphery" (column 4, lines 42 and 43), which is "snappingly received in groove 16l" of the housing (column 4, line 56 and 57). In other words, Rea teaches that the tubular "pilot member" is locked into place within the tubular housing by pressing it into the end of the housing bore until ring 22d snaps into groove 16l.

Berry teaches an alternative manner of locking two concentric tubes together, that is, by providing radially extending fins on the outer periphery of the inner tubular member which collapse to frictionally lock the members together when the inner tubular member is pressed into the outer one. Berry points out that the techniques used in the prior art required extensive machining operations to form the conduit entry with their attendant increased costs, which are not required by his system (see column 1, line 59 to column 2, line 38). From our perspective, one of ordinary skill in the art would have found it obvious to modify Rea by replacing the snap ring locking feature with the friction locking feature disclosed by Berry for Berry's stated advantage of simplifying the construction of the two members, as well as for the self-evident advantage of ease of installation of the inner

member, which would have been recognized by the artisan.[2] While this is not the same reasoning as is advanced by the appellant for the claimed construction, it nevertheless results in the claimed subject matter and constitutes a proper suggestion to combine the references.[3]

It therefore is our conclusion that the combined teachings of Rea and Berry establish a prima facie case of obviousness with regard to the subject matter recited in claim 11. This being the case, we will sustain this rejection of claim 11. In addition, since the appellants have chosen not to challenge with any reasonable specificity before this Board the rejection of the subject matter presented in dependent claims 13-15, they are grouped with independent claim 11, and fall therewith. See In re Nielson, 816 F.2d 1567, 1572, 2 USPQ 2d 1525, 1528 (Fed. Cir. 1987).

While we have carefully considered the arguments presented by the appellants, they have not persuaded us that the rejection on the basis of Rea and Berry should not be

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[2]In an obviousness assessment, skill is presumed on the part of the artisan, rather than the lack thereof. In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

[3]The prior art teachings relied upon need not disclose the same advantage that the appellant alleges, for all that is required is that there is a reasonable suggestion to combine the references. See In re Kronig, 539 F.2d 1300,1304, 190 USPQ 425, 427-428 (CCPA 1976); and Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Int. 1985), aff'd. mem., 759 F.2d 1017 (Fed. Cir. 1986).

sustained. Our position with regard to each should be apparent from the explanations provided above. In addition, with regard to the argument that the localized flat portions shown by Berry in Figure 11 would make the insert difficult to insert and would not provide the centering feature (Brief, page 4), we point out that the dimensions of the Berry fins are essentially the same as those disclosed in the appellants' invention, which gives rise to the presumption that they would be no less operable than those of the claimed invention.

SUMMARY

The rejection of claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Bartholomew in view of Berry is not sustained.

The rejection of claims 11 and 13-15 under 35 U.S.C. § 103(a) as being unpatentable over Rea in view of Berry is sustained.

A rejection of each of the claims having been sustained, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

IAN A. CALVERT Administrative Patent Judge	)))))) BOARD OF PATENT
NEAL E. ABRAMS Administrative Patent Judge	) APPEALS) AND) INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)))))

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